THE CLAIMS

A detailed listing of all of originally filed Claims 1-25 is provided below. A status identifier is provided for each claim in a parenthetical expression following each claim number.

1 - 6. (Canceled)

7. (Currently Amended) ~~The protocol of claim 6~~ A serverless name resolution protocol through which unique numbers are resolved to addresses, comprising the steps of:

receiving at a first node a request message from a requester node seeking address resolution of a second node having a unique number identifier, the request message including address information of the requester node;

populating a routing table of the first node with the address information of the requester node,

wherein the step of populating the routing table comprises the steps of:

determining if the address information of the requester node is already in the routing table,

refreshing the address information of the requester node if more recent than the address information of the requester node already stored in the routing table, else

computing a distance between the address information of the first node and the requester node,

determining from the distance a selected level into which to store the address information of the requester node,

wherein the selected level is a last level having K entries stored therein, and wherein the step of determining the selected level comprises the steps of determining that an entry should be replaced, and replacing the entry with the address information of the requester node, and

storing the address information in the selected level;

analyzing the request message;

generating a response message to the requester node identifying address information of the first node as best matching for the request message when one of three conditions is met; otherwise

determining a suitable next hop for the request; and

forwarding the request message to the suitable next hop.

8. (Canceled)

9. (Currently Amended) ~~The protocol of claim 8~~, A serverless name resolution protocol through which unique numbers are resolved to addresses, comprising the steps of:

receiving at a first node a request message from a requester node seeking address resolution of a second node having a unique number identifier, the request message including address information of the requester node;

populating a routing table of the first node with the address information of the requester node,

wherein the step of populating the routing table comprises the steps of:

determining if the address information of the requester node is already in the routing table,

refreshing the address information of the requester node if more recent than the address information of the requester node already stored in the routing table, else

computing a distance between the address information of the first node and the requester node,

determining from the distance a selected level into which to store the address information of the requester node,

wherein the selected level is a last level, and

storing the address information in the selected level;

analyzing the request message;

generating a response message to the requester node identifying address information of the first node as best matching for the request message when one of three conditions is met; otherwise

determining a suitable next hop for the request;

forwarding the request message to the suitable next hop;

preparing a flooding message containing the address information of the first node with an empty list of already flooded nodes;

sending the flooding message to the requester node;

preparing a list of nodes in the routing table whose distance to the requester node is smaller than $DMAX/(P^{(L-1)})$~~,~~

~~remove~~ removing from the list nodes that are marked as already flooded when the addition of the new entry is a result of a flooding message~~,~~;

preparing a flooding message containing the address information of the requester node~~,~~; and

~~send~~ sending the flooding message to all nodes in the list.

10. (Currently Amended) ~~The protocol of claim 6~~ A serverless name resolution protocol through which unique numbers are resolved to addresses, comprising the steps of:

receiving at a first node a request message from a requester node seeking address resolution of a second node having a unique number identifier, the request message including address information of the requester node;

populating a routing table of the first node with the address information of the requester node,

wherein the step of populating the routing table comprises the steps of:

determining if the address information of the requester node is already in the routing table,

refreshing the address information of the requester node if more recent than the address information of the requester node already stored in the routing table, else

computing a distance between the address information of the first node and the requester node,

determining from the distance a selected level into which to store the address information of the requester node,

wherein the selected level is a last level having more than K entries stored therein, and wherein the step of determining the selected level comprises the step of adding a new level and splitting the entries in the last level between the last level and the new level according to a distance from the address information of the first node, and

storing the address information in the selected level;

analyzing the request message;

generating a response message to the requester node identifying address information of the first node as best matching for the request message when one of three conditions is met; otherwise

determining a suitable next hop for the request; and

forwarding the request message to the suitable next hop.

11 - 25. (Canceled)